Amendment to the Drawings

Please amend FIG. 2 as indicated on the attached replacement sheet to number the capacitive coupling circuit 79.

Remarks

Claims 1-12 and 24-32 remain in the application.

The Examiner objects to the drawings on a number of grounds. The objection to the double designation of the magnetron has been resolved by an amendment to page 3. The objection to the double use of reference numeral "80" has been resolved by the amendments to page 4 and FIG. 2. The objection to the double use of the reference numeral "64" has been resolved by the amendment to page 10. The objection to the double use of the reference numeral "162" has been resolved by the second amendment to page 12. The objection to unillustrated element 56 has been resolved by the previously described amendment to page 3. The objection to unillustrated element 129 has been resolved by the first amendment on page 13; however, no problem is seen on line 19 of that page. The objection to lack of description of element 66 in FIGS. 1 and 5 has been resolved by an amendment to page 3. The objection to the lack of description of element 174 in FIG. 11 has been resolved by an amendment to page 13.

The Examiner objects to the specification and requires that the patent number of the parent be listed. It has been inserted in three locations.

Applicants thank the Examiner for the careful review of the description and drawings.

The Examiner objects to the claims because a period is needed in claim 3 and "coil" needs to be inserted into claim 29. These claims have been corrected without affecting their scope.

The Examiner rejects claims 26 and 27 under 35 U.S.C. §112, ¶2 for lack of antecedent basis for "solenoid coils." The phrase has been corrected as is obvious to the ordinary mechanic and reader and hence the amendment does not affect the scope of the claims.

The Examiner rejects claims 25-27, 29, 31, and 32 under 35 U.S.C. §102(e) as being anticipated by US Patent 6,579,421 to Fu.

The rejection of claim 25 is traversed. The Examiner is not reading the claim limitation in view of the written description and further reads in limitations not found. As should be clear from the written description, an electromagnetic coil coaxially arranged about the chamber axis means

the coil are wrapped about the central axis. The filed disclosure does not support a claim interpreted to cover two coils arranged at angular positions about the chamber axis. Furthermore, any two of Fu's coils 30-33 would not be considered to be arranged about the chamber axis but to be disposed on different sides of the axis. Most importantly, it is not seen how any one of Fu's coils is disposed radially outside of another of his coils. Fu's apparatus is clearly intended to be located at the same radius. Furthermore, claims 26 and 27 require independent powering of the two coils or additionally two power supplies for them. Fu discloses only a single power supply 34 for all his coils. While the power supply 34 of FIG. 4 has two outputs, these outputs are 90° out of phase at all time. As Fu states at col. 6, line that the waveforms of the two outputs "are identical except for a phase offset of 90°." It is clear that Fu is intending to rotate a horizontal magnetic field. To do so, typically requires varying the coil currents in carefully controlled ratios and phase, the antithesis of independence.

Claim 29, requires the electromagnetic coil to inhibit diffusion of the plasma to the RF coil. Fu is silent about inhibiting diffusion. In fact, Fu's invention is directed to increasing the radial velocity of the plasma ions to increase sidewall coverage.

New dependent claims 33 and 34 have been added to require that the coil(s) are wrapped around the central axis.

The Examiner has rejected claim 30 under 35 U.S.C. §103(a) as being obvious over Fu in view of "Method for Controlling the Crystalline Phase of Tantalum," *IBM Technical Disclosure Bulletin*, vol. 32, no 5A, pp. 43, 43, October 1989 (IBM), hereafter IBM. This claim depends from a claim believed to be in allowable form and should therefore also be allowable. IBM discloses sputtering of tantalum, although apparently in a different production configuration than the other references, and does not overcome the deficiencies of the Fu reference.

The examiner has allowed claims 1, 2, 5-15 and 24. Claim 9 has been broadened to not specify the aspect ratio of the tubular coil. This limitation has been reintroduced in new dependent claim 33.

The Examiner has indicated that claim 28 would be allowable if rewritten in independent form. Since it is believed that parent claim 15 is allowable, claim 28 remains in dependent form at

this time.

In view of the above amendments and remarks, early consideration and allowance of all claims are respectfully requested. If the Examiner believes that a telephone interview would be helpful, he is invited to contact the undersigned attorney at the listed telephone number, which is on California time.

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Respectfully submitted,

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